

U.S. ENVIRONMENTAL PROTECTION AGENCY
POLLUTION/SITUATION REPORT
Bunker Hill SF site ER - Removal Polrep
Final Removal Polrep



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
Region X

Subject: POLREP #6
Final
Bunker Hill SF site ER

Smelterville, ID
Latitude: 47.5469330 Longitude: -116.1645230

To: Beth Sheldrake, EPA Region 10
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Date: 3/29/2019
Reporting Period: March 17-22, 2019

1. Introduction

1.1 Background

Site Number:	Contract Number:
D.O. Number:	Action Memo Date: 3/18/2019
Response Authority: CERCLA	Response Type: Emergency
Response Lead: EPA	Incident Category: Removal Action
NPL Status: NPL	Operable Unit:
Mobilization Date: 2/8/2019	Start Date: 2/9/2019
Demob Date: 5/30/2019	Completion Date: 5/30/2019
CERCLIS ID:	RCRIS ID:
ERNS No.:	State Notification:
FPN#:	Reimbursable Account #:

1.1.1 Incident Category

Emergency Response

1.1.2 Site Description

The Bunker Hill Superfund Site (Site) is located in the Coeur d'Alene Basin of Northern Idaho. The Site includes mining-contaminated areas in the Coeur d'Alene River corridor, adjacent floodplains, downstream water bodies, tributaries, and fill areas, as well as the 21-square-mile Bunker Hill "Box," where historical ore-processing and smelting operations occurred. The Site was listed on the National Priorities List (NPL) in 1983 and is assigned CERCLIS identification number IDD048340921. The Site is also known as the Coeur d'Alene Basin Cleanup. EPA has divided the Bunker Hill Superfund Site into three Operational Units (OUs); The OU 1 includes the populated areas of Bunker Hill Box and is where the current Bunker Hill Superfund Site Emergency Response (ER) is located.

1.1.2.1 Location

The location of on-site activities surrounds the Central Impoundment Area (CIA), slurry wall, I-90 subsidence zone, and the seep discharging into the Coeur d'Alene River. EPA and the Corps of Engineers recently completed construction of a subsurface groundwater cutoff wall in this same area, between the site and I-90 and the river. I-90, through this area, was constructed on top of historic mine waste. Groundwater levels are naturally high and there is a direct hydraulic connection between the site and the river. As a result, roadway subsidence and groundwater seeps are not historically uncommon. I-90 is a major east west transportation corridor through northern Idaho and is considered critical infrastructure. Within this area, an array of tasks associated with existing groundwater monitoring wells, new soil test pits, and new groundwater monitoring wells were prioritized.

1.1.2.2 Description of Threat

During EPA Remedial cleanup activities which include the construction of a groundwater cutoff wall and collection system to collect and treat contaminated groundwater, a sediment seep was discovered in the South Fork of the Coeur d'Alene River in the vicinity of the cutoff wall. Additionally, over the course of a few days a subsidence had formed in Interstate 90 near the seep. EPA Remedial program contractors have been investigating the source of the seep. Support from the EPA ER program was requested to provide rapid resources to identify the extent of the issue, assist EPA Remedial Project Managers in characterizing threats of a release of contaminated material to the Coeur d'Alene River, and what impact groundwater extraction wells could help in mitigating these threats.

1.1.3 Preliminary Removal Assessment/Removal Site Inspection Results

Region 10 mobilized one OSC to assist the Remedial Program. START and ERRS contractors have also been activated to support the assessment and mitigation.

2. Current Activities

2.1 Operations Section

2.1.1 Narrative

During the current PolRep reporting period, the EPA Region 10 Emergency Management Program (EMP) continued to provide support to the EPA Region 10 Remedial Cleanup Program for the investigation of the situation and to initiate necessary mitigation measures. Details on the response actions performed during this reporting period are summarized below.

2.1.2 Response Actions to Date

Groundwater Well Data Collection

Preliminary and final laboratory results from groundwater sampling activities were forwarded to the Remedial program after they were received and START continued to use Scribe to manage sample information and results.

Geophysical Survey

No additional actions were performed during the reporting period.

New Monitoring Wells

No drilling activity occurred during the current PolRep reporting period. The subcontracted surveyor was on site to survey the newly installed wells LA-04 and PW-1.5 on Monday, March 18.

Extraction Wells and Pump Tests

No additional extraction wells were installed and no pump tests were performed during the current reporting period.

As part of the construction of the water conveyance system, ERRS continued to install pumps, pipes, and associated equipment in the existing extraction wells (PW-01, PW-1.1, PW-1.5, and PW-02). Additional details are provided below.

Prior to final installation of the well pumps, and prior to the start of the shakedown test, the drilling subcontractor bailed out each of the well sumps, removing a significant volume of sediment and pea gravel: PW-01, PW-1.1, and PW-02 all had three feet of sediment removed, and PW-1.5 had five feet of sediment removed.

Tank Farm and Conveyance Pipeline

ERRS completed the conveyance pipeline system on Friday, March 22. Final tasks and features installed on the conveyance system included the following:

- ERRS installed cribbing along the conveyance pipeline for support, including within the Bunker Creek crossing, and installed jersey barriers along the length of the pipeline to prevent movement of the line during flow-related expansion. ERRS also placed piles of sand on top of the pipeline in a few locations to hold the line in place. Specific locations included between the Emergency Discharge T and the south CIA access road, and also on the south side of Bunker Creek, near the Water Treatment Settling Pond.
- ERRS replaced generator at the pumping wells, demobed a 4-inch booster pump, and installed a larger 6-inch booster pump more appropriately sized for the conveyance system application.
- ERRS constructed five manifolds, and installed them into the conveyance system via the respective gate valves and 3-inch couplers located along the 10-inch HDPE conveyance line. Four similarly constructed manifolds were installed at the pumping/extraction wells (PW-01, PW-1.1, PW-1.5, and PW-02). Each well manifold was constructed with in-line 4-inch flow meters, backflow prevention valves, and sample ports to collect discharge water samples from each well during pumping. One manifold was placed to connect the frac tank discharge line to the 10-inch HDPE conveyance line. The manifold was similarly constructed to the well manifolds, except it did not have a sample port. Instead, the sample port was placed down-line on the 10-inch line, in order to sample the conveyance line during discharge while either conducting flow via the frac tank, or directly along the 10-inch HDPE line (bypassing the frac tank).
- ERRS installed a flow meter in the 10-inch HDPE line downstream of the frac tank and booster pump to provide total discharge measurement when the system is operational.

After the system construction was complete, ERRS successfully conducted a shakedown test on Thursday, March 21. The shakedown test consisted of pumping approximately 500 gallons of groundwater from each of the four wells (PW-01, PW-1.1, PW-1.5, and PW-02) into the line and to the frac tank, to ensure that all systems were functional, and to check for any leaks. The frac tank was then pumped down into the Emergency Discharge T, into the CIA ditch. START observed the entire discharge, and confirmed that no flow occurred in the ditch, and that all water immediately infiltrated below the riprap lining the ditch at the discharge location. Flow occurred for approximately four minutes, discharging approximately 1,600 gallons.

A START engineer also prepared a draft schematic of the water conveyance system, detailing the layout and specifications.

Emergency Discharge of Extracted Groundwater

EPA continued to manage extracted groundwater in accordance with the Water Management and Emergency Discharge Contingency Plan that was prepared for the site. The only discharge that occurred during the current PolRep reporting period was during the system shakedown test on March 21, which is described above. All discharged water was observed to infiltrate into the ground at the discharge point, and no flow was observed towards Bunker Creek.

Site Logistics

START began to demobilize from the site on Sunday, March 17. By Monday, March 18, most of the START staff had returned to Seattle with the EPA Mobile Command Post, Response Trailer, and other EPA Region 10 EMP assets, leaving one START engineer on site.

EPA and START met with IDEQ to coordinate the transducer equipment rentals, and also handed over custody to IDEQ of the PW-01 and PW-02 pump test turbidity samples.

ERRS rocked and graded 4,020 linear feet of road on site from the west gate to just past PW-02. Three types of rock were used, 793.78 tons of $\frac{3}{4}$ " minus, 139.27 tons of 2.5" minus, and 944.73 tons of $\frac{3}{4}$ " to 1 $\frac{1}{2}$ " rock, for a total of 1,877.78 tons. ERRS continued to install upgrades and improvements to the existing crossing between the support zone and the extraction well zone at the northwest corner of the CIA. The access bridge to the treatment pond was removed and prepared for demobilization following the finalization of the water conveyance pipeline construction. ERRS repaired the silt fence along the CIA ditch where the bridge was removed, and placed coir geotextile fabric and straw wattles along the disturbed areas north of the slurry wall, and also repaired areas of coir geotextile along the south side of the slurry wall where the crane matting was placed. ERRS also decontaminated and demobilized the surplus frac tanks throughout the week, and placed 3 CY of sludge into the sludge pond located on the CIA. One frac tank was left on-site, associated with the conveyance system. ERRS decontaminated equipment and prepared the rental equipment for demob throughout the week.

A subcontractor to START completed the guardrail repairs along the west-bound sections of I-90, on Thursday, March 22, 2019. The work was done in coordination with the Idaho Transportation Department (ITD) to schedule a partial lane closure for access to the roadside shoulder.

EPA, ERRS, START, the Corps, Wood, Jacobs, and GeoTek conducted a site walk on Thursday, March 21, to observe site conditions and discuss restoration of the disturbed areas.

EPA, ERRS, and START demobilized on Friday, March 22.

ERRS remobilized to the site on May 30 to demobilize the generator that was setup on PW-2 and to dispose of 8 drums of cuttings/core borings from the well drilling activities. The cuttings/core borings were taken to the Paige Repository for disposal.

2.1.3 Enforcement Activities, Identity of Potentially Responsible Parties (PRPs)

The Bunker Hill site is a current NPL site. Previous Known PRPs include:

Bunker Hill Mining Corporation
Placer Mining Corporation
Liberty Silver Corporation
Gulf Resources & Chemical Corporation
Pintlar Corporation
ASARCO, Inc.
Government Gulch Mining Company, Ltd,
Federal Mining and Smelting Company
Hecla Mining Company
Sunshine Mining Company
Callahan Mining Corporation
Union Pacific Railroad Company

2.2 Planning Section

2.2.1 Anticipated Activities

None anticipated.

2.2.1.1 Planned Response Activities

None

2.2.1.2 Next Steps

None

2.2.2 Issues

2.3 Logistics Section

No information available at this time.

2.4 Finance Section

Estimated Costs *

	Budgeted	Total To Date	Remaining	% Remaining
Extramural Costs				
ERRS - Cleanup Contractor	\$1,252,007.39	\$929,735.26	\$322,272.13	25.74%
TAT/START	\$890,919.00	\$868,308.27	\$22,610.73	2.54%
Intramural Costs				
Total Site Costs	\$2,142,926.39	\$1,798,043.53	\$344,882.86	16.09%

* The above accounting of expenditures is an estimate based on figures known to the OSC at the time this report was written. The OSC does not necessarily receive specific figures on final payments made to any contractor(s). Other financial data which the OSC must rely upon may not be entirely up-to-date. The cost accounting provided in this report does not necessarily represent an exact monetary figure which the government may include in any claim for cost recovery.

2.5 Other Command Staff

2.5.1 Safety Officer

OSC

2.5.2 Liaison Officer

2.5.3 Information Officer

Mark MacIntyre

3. Participating Entities

3.1 Unified Command

3.2 Cooperating Agencies

USEPA

USACE

IDEQ

ITD

4. Personnel On Site

EPA

USACE

IDEQ

IDOT

START

ERRS

Jacobs

Environmental West Exploration

H2O

Sage Earth Sciences

5. Definition of Terms

No information available at this time.

6. Additional sources of information

No information available at this time.

7. Situational Reference Materials

No information available at this time.